

**REMARKS**

Claims 1 through 11 and 15 have been previously canceled. Claims 21 and 33 have been amended. Claims 12 through 14 and 16 through 33 remain in the application. A marked up copy of the amended claims are attached hereto as Appendix A.

Claims 12 through 14 and 16 through 20 have been allowed.

Claim 21, 23, 24, and 30 through 33 were rejected under 35 U.S.C. § 103 as being unpatentable over Suyama et al. (U.S. Patent No. 5,575,497) in view of Sutherland (U.S. Patent No. 6,123,355). Applicants respectfully traverse this rejection.

U.S. Patent No. 5,575,497 to Suyama et al. discloses a method for developing an air bag for a vehicle. An airbag device  $A_D$  for a driver's seat  $S_D$  and an airbag device  $A_N$  for passenger's seat  $S_N$  are disposed in a vehicle laterally symmetrically with each other with respect to a center line of a vehicle body and have substantially the same structure. Each of the air bag devices  $A_D$  and  $A_N$  includes an inflator  $I$  mounted in an outer portion of a seat back  $S_1$  of each of the driver's seat  $S_D$  and the passenger's seat  $S_N$  for injecting a high pressure gas, a first air bag  $B_S$  which is inflated and developed along an inner surface of a side door  $D$  by the high pressure gas from the inflator  $I$ , and a second air bag  $B_F$  which is integrally coupled to the first air bag  $B_S$  and inflated and developed along a rear surface of an instrument panel  $P$ . The first and second air bags  $B_S$  and  $B_F$  are formed separately and united integrally by stitching, and are mounted in their compact folded states in the outer portions of the seat backs  $S_1$  along with the inflators. As can be seen by reference also to FIG. 2, two pressure valves  $V, V$  are mounted at a joint between the first and second air bags  $B_S$  and  $B_F$  united integrally by a stitching 1. Each of the pressure valves  $V$  is a circular opening 2 defined in the first and second air bags  $B_S$  and  $B_F$  superposed on each other, and a membrane 4 placed to cover the opening 2 and fixed by a stitching 3. When the membrane

4 is in a state shown by a dashed line in FIG. 2, it air-tightly partitions an internal space in the first air bag B<sub>S</sub> and an internal space in the second air bag B<sub>F</sub> from each other. When the internal pressure in the first air bag B<sub>S</sub> is increased to exceed a predetermined value, the membrane 4 is broken into a state shown by a solid line in FIG. 2 to put the internal space in the first air bag B<sub>S</sub> into communication with the internal space in the second air bag B<sub>F</sub>. In FIGS. 4A to 4G, air bag devices A<sub>D</sub> and A<sub>N</sub> are mounted in center pillars and each of the inflators I, I<sub>S</sub>, and I<sub>F</sub> is mounted in the center pillar in place of mounting in the seat back S<sub>I</sub>. Suyama et al. '497 does not disclose a frontal air bag for mounting solely to a front pillar of a vehicle to deploy downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated.

U.S. Patent No. 6,123,355 to Sutherland discloses a vehicle occupant safety apparatus. The safety apparatus 10 includes first and second inflators 14 and 16 and first and second inflatable vehicle occupant protection devices in the form of a window air bag or side curtain 20 and a headliner air bag 22. The inflators 14 and 16 and the air bags 20 and 22 are mounted as a module 60 in the vehicle 12. The module 60 or portions thereof including the inflators 14 and 16 may alternatively be mounted near the front of the vehicle 12 on or near the A-pillar or at another location on the vehicle. The first air bag 20, or window air bag, when inflated, extends generally downward in the vehicle 12 along the side of the window 44. The second air bag 22, or headliner bag, when inflated, extends generally laterally in the vehicle 12, between the roof 46 and the headliner 48. Sutherland does not disclose a frontal air bag for mounting solely to a front pillar of a vehicle to deploy downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated.

In contradistinction, claim 21, as amended, clarifies the invention claimed as a frontal air bag system for a vehicle including a frontal air bag adapted for mounting solely to a

front pillar of the vehicle. The frontal air bag is adapted to be inflated and extend downward and sideways in a lateral direction in front of an occupant seated in the vehicle. Claim 33 has been amended similar to claim 21 and includes the features of a single frontal air bag of the present invention.

The United States Court of Appeals for the Federal Circuit (CAFC) has stated in determining the propriety of a rejection under 35 U.S.C. § 103, it is well settled that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). The law followed by our court of review and the Board of Patent Appeals and Interferences is that “[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” In re Rinehart, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (CCPA 1976). See also In re Lalu, 747 F.2d 703, 705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984) (“In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.”)

None of the references cited, either alone or in combination with each other, teach or suggest the claimed invention of claims 21 and 33. Specifically, Suyama et al. ‘497 merely discloses a method for developing an air bag for a vehicle in which an air bag is stored in a seat back having a first air bag inflated upwardly along a side door and a second air bag coupled to the

first air bag inflated upwardly along a rear surface of an instrument panel. Suyama et al. '497 lacks a frontal air bag for mounting solely to a front pillar of a vehicle to deploy downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated. In Suyama et al. '497, the second air bag B<sub>F</sub> is an extension of the first air bag B<sub>S</sub>, which is a side air bag. Although Suyama et al. '497 discloses that air bag devices A<sub>D</sub> and A<sub>N</sub> are mounted in a center pillar, it only expressly discloses that each of the inflators I, I<sub>S</sub> and I<sub>F</sub> is mounted in the center pillar in place of mounting in the seat back S<sub>I</sub> and does not disclose that the first and second air bags B<sub>S</sub> and B<sub>F</sub> are mounted in a front pillar. Contrary to the Examiner's position, Suyama et al. '497 does not disclose inflating and extending an air bag downward and sideways in a lateral direction in front of an occupant seated in the vehicle. In Suyama et al. '497, the first air bag is developed into a space between the occupant and a side door and the second air bag is developed into a space between the occupant and an instrument panel. Suyama et al. '497 does not suggest how to deploy a frontal air bag from the A-pillar downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated. Sutherland '355 merely discloses a vehicle occupant safety apparatus having an air bag module or portions thereof including the inflators mounted near the front of the vehicle on or near the A-pillar or at another location on the vehicle. Sutherland '355 lacks a frontal air bag for mounting solely to a front pillar of a vehicle to deploy downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated. The Examiner may not, because he/she doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. See In re Warner, 379 F. 2d 1011, 154 U.S.P.Q. 173 (C.C.P.A. 1967). The references, if combinable, fail to teach or suggest the combination of a frontal air bag system including a frontal air bag adapted for mounting solely to a front pillar of a

vehicle to deploy downward and sideways in a lateral direction in front of an occupant seated in the vehicle when inflated as claimed by Applicants. The present invention is novel and unobvious because the frontal air bag deploys downwardly and sidewardly into position and not rearwardly towards the occupant. Therefore, it is respectfully submitted that claims 21 and 33 and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. § 103.

Claim 25 was rejected under 35 U.S.C. § 103 as being unpatentable over Suyama et al. '497 as modified by Sutherland '355 and further in view of Wipasuramonton et al. (U.S. Patent No. 5,615,909). Applicants respectfully traverse this rejection for the same reasons given above to claim 21.

Claims 26 and 27 were rejected under 35 U.S.C. § 103 as being unpatentable over Suyama et al. '497 as modified by Sutherland '355 and further in view of Boerger (U.S. Patent No. 6,050,596). Applicants respectfully traverse this rejection for the same reasons given above to claim 21.

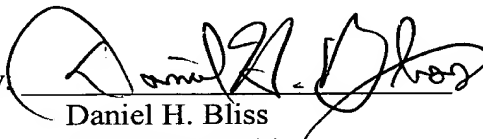
Claims 22, 28, and 29 were rejected under 35 U.S.C. § 103 as being unpatentable over Suyama et al. '497 as modified by Sutherland '355 and further in view of Yamada (U.S. Patent No. 5,884,937). Applicants respectfully traverse this rejection for the same reasons given above to claim 21.

Obviousness under § 103 is a legal conclusion based on factual evidence (In re Fine, 837 F.2d 1071, 1073, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988), and the subjective opinion of the Examiner as to what is or is not obvious, without evidence in support thereof, does not suffice. Since the Examiner has not provided a sufficient factual basis which is supportive of his position (see In re Warner, 379 F.2d 1011, 1017, 154 U.S.P.Q. 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968)), the rejections of claims 21 through 33 are improper. Therefore, it

is respectfully submitted that claims 21 through 33 are allowable over the rejections under 35 U.S.C. § 103.

Based on the above, it is respectfully submitted that the claims are in a condition for allowance or in better form for appeal. Applicants respectfully submit that the final rejection is improper and reconsideration and withdrawal of the final rejection be taken. It is respectfully requested that this Amendment be considered and entered under 37 C.F.R. 1.116.

Respectfully submitted,

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**APPENDIX A****VERSION OF THE CLAIMS WITH MARKINGS TO SHOW THE CHANGES**

Please amend claims 21 and 33 as follows:

21. (TWICE AMENDED) A frontal air bag system for a vehicle comprising:  
a frontal air bag adapted for mounting solely to a front pillar of the vehicle; and  
wherein said frontal air bag is adapted to be inflated and extend downward and  
sideways in a lateral direction in front of an occupant seated in the vehicle.

33. (AMENDED) A frontal air bag system for a vehicle comprising:  
a single frontal air bag adapted for mounting solely to a pillar of the vehicle; and  
wherein said frontal air bag is adapted to be inflated and extend downward and  
sideways in a lateral direction in front of an occupant seated in the vehicle.